

PRIMARY TUBERCULOSIS OF THE PAROTID GLAND.¹

By JACOB FRANK, M.D.,

OF CHICAGO,

SURGEON TO THE GERMAN AND CONSULTING SURGEON TO ST. ELIZABETH'S HOSPITALS.

AFTER carefully perusing the literature, two facts stand out prominently, namely, that primary tuberculosis of the parotid gland is either of very rare occurrence, or remained unrecognized by clinicians, as up to the present time only eight cases of this affection have been recorded, and none of these cases were observed by English or American surgeons. Our most recent English text-books on surgery and surgical pathology do not mention anything about this disease.

We must acknowledge our indebtedness to the German, Italian, and French surgeons for their scientific reports of the pathology of primary tuberculosis of the parotid gland and the treatment thereof. To L. von Stubenrauch belongs the credit for reporting the first case of primary tuberculosis of the parotid. This appeared in the *Archiv für klinische Chirurgie* in 1894, Band xlvii, pp. 26-31. De Paoli, in the "Annal. del l'Academia Medica di Perugia in 1893," one year previously reported his first case, which later was found to be secondary to middle ear disease,—undoubtedly of tubercular origin; therefore this case cannot be classified among the primary lesions. Following von Stubenrauch's report, de Paoli, Legueu et Morieu, Backhorn, Meslay, P. Legene, and Küttner have each reported one case.

Considering the rarity of this disease and the failure of our English and American confrères to note its existence, I consider myself very fortunate in being able to add one more

¹ Read before the Chicago Surgical Society, June, 1902.

case to the literature, and to be the first American surgeon to recognize the existence of this seemingly rare affection.

The case was that of a male child about twenty-two months old, of healthy parentage, always in good health, who developed a swelling in the right parotid region. After some time, as the swelling persisted, the child was taken to a hospital, where an incision was made, with evacuation of some pus. Six weeks later, the opening not having closed, I was consulted. The child had a swelling in the right parotid region, more pronounced in front than behind, tense, shiny, of a bluish discoloration, and having at its centre a fistulous opening with a pronounced granular wall; from this opening a thick, cheesy material could be expressed, and on closer examination a flow of salivary secretion was detected.

The child was readmitted to the hospital, where an incision about two and one-half inches in length behind the ear in a downward direction was made. The broken-down tissue was first curetted, the wound thoroughly cleansed, then the rest of the diseased gland, including a goodly portion of the healthy tissue, was removed by careful dissection. The cavity was packed with strips of gauze and a dressing applied. The child remained in the hospital for five days. Only the outside dressing had to be changed daily for the first three days, as it was saturated with oozing and salivary fluids; after this, complete daily dressings were carried out until full recovery. An unavoidable temporary paralysis resulted on the same side of the face, which lasted for several weeks, gradually disappearing. It is now a little over two years since the operation; the child enjoys the best of health, and there is no evidence of any recurrence.

A microscopic examination of the removed glandular tissue established the positive character of the pathology of the gland, being histologically typical of tuberculosis of that organ.

In presenting this rare and interesting subject, after analyzing all recorded cases together with my own report, I shall take up separately the etiology, pathology, course, symptoms, diagnosis, prognosis, and treatment based upon a study of these cases.

(1) The etiology of primary tuberculosis of the parotid

gland may, like all causative factors, be divided into a predisposing or primary cause and a specific or secondary cause. The predisposing cause may be a slight injury. The specific or secondary cause is due to an infection by the *Bacillus tuberculosis* of Koch, which may, according to various writers on this subject, take place in different ways. L. von Stubenrauch is of the opinion that the infection takes place from the mouth through Steno's duct, as was demonstrated in his case where the duct was occluded and the gland converted into a cyst which proved to be tubercular. Backhorn, on the other hand, claims that it takes place through the lymph vessels from a wound in the mouth or carious teeth near the parotid; whilst de Paoli claims that it may also take place through the circulation, and he bases his opinion on some of his successful experiments on animals, where he succeeded in producing, after a method which he failed to describe, tuberculosis of the parotid gland. All opinions, however, are merely theoretical. Although von Stubenrauch's opinion seems to me to be more plausible as the route is more direct through Steno's duct, yet the other theories must not be rejected entirely, for we get primary tuberculosis of the knee-joint, a location which has no ducts. The disease occurs between the ages of two and sixty-one years, more frequently in adult life; both sexes are equally liable to this disease, and both sides are as frequently affected.

(2) The pathology: two forms are recognized by von Stubenrauch, de Paoli, and others,—a diffuse and circumscribed form. The diffuse form being the most common, consisting of small and large caseous areas or abscesses, the parotid tissue is oedematous, friable, and in places indurated. The circumscribed form is very rare; it may take the form of a cold abscess or the form of a cyst, as was demonstrated in von Stubenrauch's case. It is a purely local affection. In some cases the glandular tissue is the seat of pathological changes, and in others again the interstitial tissue. Histologically, all the elements of a tubercular process are found,—giant, epithelioid, and round cells; tubercles of Laennec, and in most of the cases tubercle bacilli, were demonstrated.

(3) The course of this disease, like all chronic infections, is very slow. In most of the cases the enlargement was noticed accidentally, and, on account of its slow growth, no further notice usually taken. Only in de Paoli's case facial paralysis was observed, after repeated attacks of facial neuralgia, long before a swelling appeared.

(4) The symptom found in most of the reported cases was swelling of the gland, either in the form of a circumscribed and fluctuating tumor or a more diffuse with occasional soft spots here and there, the skin being usually adherent, red, tense, shiny, and oedematous. As a rule, on pressure the size of the swelling does not diminish, with the exception of Küttner's case, where a communication existed between the abscess and the duct, and on pressure some of the pus escaped through the duct, diminishing thereby the size of the swelling. There was no enlargement of the glands of the neck in any of the cases. In most of the cases pain was present late in the disease.

(5) The diagnosis, on account of its rarity, the absence of the disease elsewhere, and also the absence of pathognomonic signs, is clinically very difficult. In all cases the diagnosis made before the operation was either syphilis, interstitial parotitis, or malignant growths; the diagnosis of the former was more frequently made. In all cases the microscope made the diagnosis after the operation. The examination of the secretion before the operation was overlooked in all cases, including my own; this should not be the case hereafter.

(6) The prognosis is very good, being a purely local affection; operative interference results in a permanent cure, as was seen in all cases, with the exception of de Paoli's case, which was already excluded from our list as not being a primary disease. In many cases temporary facial paralysis resulted, which in course of time disappeared. In de Paoli's case the paralysis was permanent, but not due to the operation.

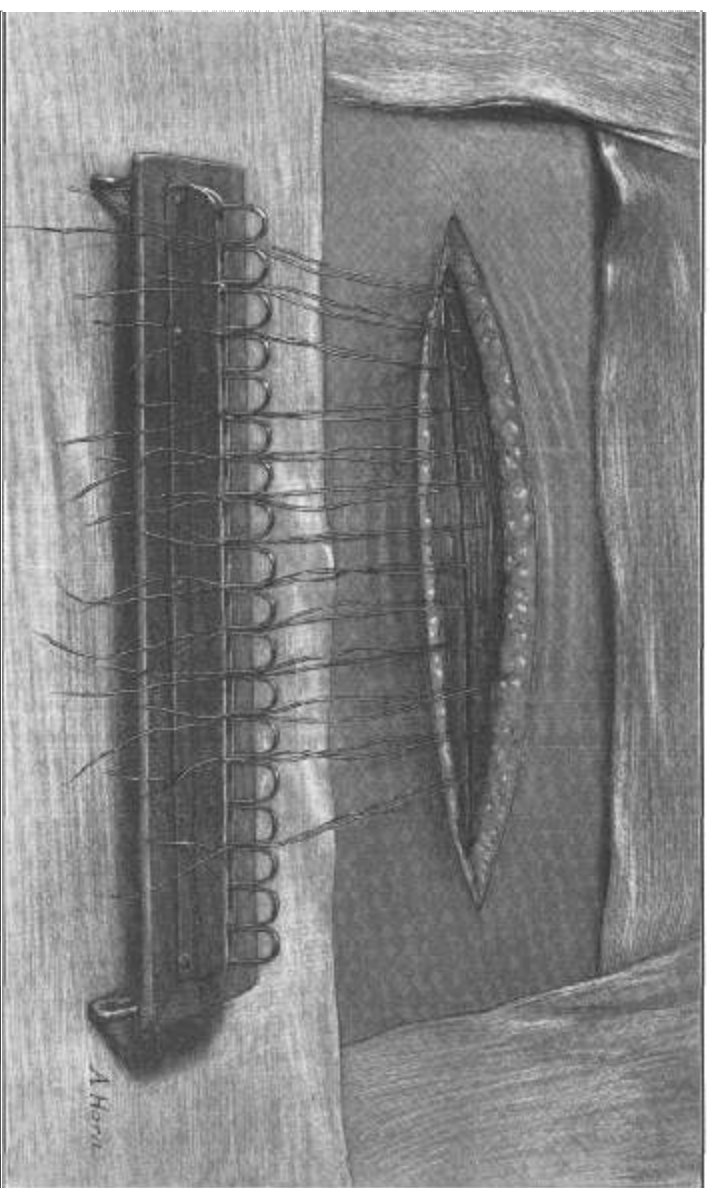
(7) The treatment is operative. There is one fact we learn from the cases recorded, that the total extirpation of the gland is not essential to a permanent cure.

TABLE OF CASES OF TUBERCULOSIS OF PAROTID GLAND GATHERED FROM LITERATURE.

BIBLIOGRAPHY.	No.	Sex.	Age.	Occupation.	Family History.	Side.	Course and Diagnosis.	Treatment and Result.	Histologically.
De Paoli, <i>Annali del l'Accademia Medica di Perugia</i> , 1893.	1	Could	not	find data.			Repeated attacks of facial neuralgia followed by facial paralysis; no diagnosis made.	Enucleation of diseased part of gland; recurrence on other side found to be secondary.	Tuberculosis demonstrated.
L. von Stubenrauch, <i>Archiv für klinische Chirurgie</i> , 1894, Vol. xlvii, pages 26-31.	2	Female.	60	Housewife.	Negative.	Right.	Stomatitis; profuse secretion of saliva for one year; cyst of parotid; diagnosis, mixed tumor. A diagnosis of syphilis.	Enucleation; complete recovery; temporary paralysis only.	Tuberculosis.
De Paoli, <i>Comptes Rendus Soc. Ital. Chir.</i> , 1895.	3	Could	not	find data.				Ligation of external carotid; complete enucleation; temporary paralysis; recovery.	Tuberculosis.
Leguen et Morleu, <i>Semaine Méd.</i> , 1895, page 549.	4	Female.	3		Negative.	Right.	One-half year duration; pain few weeks before operation; swelling; diagnosis, sarcoma.	Operation; partial enucleation; recovery; temporary paralysis; no recurrence.	Tuberculosis.
Backhorn, <i>Archiv für klinische Chirurgie</i> , Band lvi, 1898, pages 189-201.	5	Female.	39	Housewife.	Negative.	Left.	Two carious teeth for past three months and swelling of gland; treatment for six weeks; for past five days severe pain; syphilis.	Operation; partial enucleation; temporary paralysis; recovery; no recurrence.	Tuberculosis.
Meslay, <i>Bull. Soc. Anat. de Paris</i> , 1898, Vol. lxxiii, pages 710, 711.	6	Male.	61	Ex-soldier.	Negative.	Left.	Diagnosed as mixed tumor; swelling present for three months; latter part painful.	Operation; partial enucleation of parotid; temporary paralysis; recovery; no recurrence.	Tuberculosis.
Kittner, <i>Handb. des pract. Chir.</i> (Braun, Mikulicz, Bergman), 1900, Band i, page 714.	7	Male.	18		Negative.	Left.	One-half year standing swelling, fluctuating; pus discharge through duct; no diagnosis.	Operation; two sittings; enucleation of pus; two partial enucleations; recovery; temporary paralysis; no recurrence.	Tuberculosis.
Legene, <i>Rev. de Chir.</i> , 1901, Vol. xxiii, pages 524-531.	8	Male.	29	Newsboy.	Negative.	Left.	Swelling ten years' standing; no pain until before operation; diagnosis, mixed tumor; syphilis.	Partial enucleation; temporary paralysis; recovery; no recurrence.	Tuberculosis.

LITERATURE.

- De Paoli: *Annal. del l'Academia Medica di Perugia*, 1893.
L. v. Stubenrauch: *Archiv für klinische Chirurgie*, 1894, Vol. xlvii, pages 26-31.
De Paoli: *Comptes Rendus Soc. Ital. Chir.*, 1895.
Legueu et Morieu: *Semaine Médicale*, 1895, page 549.
Backhorn: *Archiv für klinische Chirurgie*, Vol. lvi, 1898, pages 189-201.
Meslay: *Bull. Soc. Anat. de Paris*, 1898, Vol. lxxiii, pages 710-716.
P. Legene: *Revue de Chirurgie*, 1901, Vol. xxiii, pages 524-531.
Küttner: *Archiv für klinische Chirurgie*, Band lvii, 1898, Heft 4.
Parent: *Thèse de Paris*, 1898.



Ligature segregator.